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The AGRICULTURAL EDUCATION Magazine

*Vigorous Youth
Increase in production
Competency in Math and Science
Total Use of Manpower
Overcoming Inflation
Realization of the Air Age
Your Part in the Fight for Freedom*



The Agricultural Education Magazine

A monthly magazine for teachers of agriculture. Managed by an editorial board chosen by the Agricultural Section of the American Vocational Association and published at cost by the Meredith Publishing Company at Des Moines Iowa.

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Editorial Comment

Plan for Reorganization of the Editing-Managing Board of Agricultural Education Magazine

AT THE annual meeting of the editing-managing board of the *Agricultural Education Magazine*, held in Boston Wednesday evening, December 10, action was taken to institute a formal organization of the board in order to expedite and systematize its work. A committee of three, consisting of R. W. Gregory, chairman, H. M. Byram, and Roy Olney, was appointed by the acting chairman. It was their duty to draw up and present to the board a series of suggestions effectuating such an organization. The committee met and, out of all of the suggestions made, presented the following proposals, which were adopted at Toledo by the agricultural education section of the American Vocational Association December 5, 1942.

- I. The editing-managing board of the *Agricultural Education Magazine* shall be composed of the following:
 1. Editor
 2. Consulting Editor
 3. Business Manager
 4. Four Regional Representatives
 5. Four Ex Officio Members
- II. Members on the editing-managing board shall be determined as follows:
 1. *Editor*. He shall be elected annually by the board.
 2. *Consulting Editor*. The retiring editor automatically shall become the consulting editor, to serve until the next retiring editor fills his place.
 3. *Business Manager*. He shall be elected annually by the board.
 4. *Regional Representatives*. There shall be one regional representative from each of the four regions elected by the members in attendance at the regional conference to serve for a term of four years, the terms of office being so arranged as to allow for one new regional representative to come on the board each year. The Western Region shall elect a representative to begin a new term of service in December, 1942; the Southern Region shall elect a representative to begin service in December, 1943; the North Atlantic Region shall elect a representative to begin service in December, 1944; and the North Central Region shall elect a representative to begin service in December, 1945, and this rotation, having once been established, shall be continued thereafter. The representatives of the regions shall be elected to their offices by those in attendance at the regional conference held prior to December in the year in which they take office.
 5. *Ex Officio Members*. These shall be (a) the chief of the Agricultural Education Service of the U. S. Office of Education; (b) the vice-president of the agricultural education section of the American Vocational Association; (c) the agricultural member of the editorial board of the *American Vocational Association Journal*; (d) the president of the agricultural teachers' association in the state where the annual meeting of the American Vocational Association is being held.
 6. *Interim Appointments*. Interim appointments to the staff shall be suggested by the editor and approved by the nominating committee.
- III. Organization of the Board:
 1. *Chairman*. Each regional representative when serving in his fourth year as a member of the board shall act as chairman of the board during that year.
 2. *Secretary*. The consulting editor shall act as secretary of the board during the entire period of his service on the board.
 3. *Nominating Committee*. The four regional representatives on the board shall act as a nominating committee for the board, and the chairman of the board shall also be chairman of the nominating committee.

IV. Duties of the Board:

1. It shall be the responsibility of the editing-managing board to elect annually, but for no more than three consecutive years of service, individuals to serve as: (a) editor and (b) business manager. The board shall arrange the election of these individuals so that both positions are not to be filled in the same year.
2. It shall be the responsibility of the board to approve annually a staff of special editors for the *Agricultural Education Magazine*.
3. It shall be the responsibility of the nominating committee to come to each annual meeting of the board with a slate of recommendations for the various positions on the board.
4. It shall be the responsibility of the editor to suggest to the nominating committee, individuals for appointment to positions on the editorial staff as special editors.
5. It shall be the responsibility of the secretary of the board to notify both the outgoing and incoming members of the editing-managing board, and the members of the editorial staff of the action taken by the board with respect to appointments to the board and to the editorial staff.
6. It shall hold a business meeting at the time of the annual meeting of the American Vocational Association.
7. It shall be the responsibility of the chairman of the board to make an annual report to the agricultural section of the A.V.A. and to the teacher-trainers and supervisors listed in the directory of the magazine.

War-Production Training Courses

WHERE can we best contribute our bit toward winning the war? This is the most pertinent question faced by every true citizen in the democratic world today. More is expected of the teacher of vocational agriculture and of the boys and the adults with whom he works than has ever been expected before. Out of some very recent experiences of my own I believe I have gleaned a few facts and suggestions that should be of help to him. I offer these here.

A short time ago I was assigned a task at which I was most happy to work. It was in reality an opportunity. It was the preparation of teaching suggestions and aids for eight different war-production training courses in the OSYA program. Naturally in the preparation of this material I had to confer with men in the technical departments of the division of agriculture of our college. These men gave me willingly much assistance without which the material I prepared would have been lacking in much vital subject matter.

From these men in the technical departments I gathered many astonishing facts. For instance, our poultry specialist informed me that in Colorado: (1) the estimated production of eggs is 106 per hen; (2) a fair standard of production is 140 to 150 eggs; (3) a good standard of production is 160 to 175 eggs.

A little better feeding, more comfortable housing conditions in the winter, and some culling would increase the rate of production from 20 to 40 percent.

From our dairy specialist I learned that in Colorado the average cow produces 4,500 pounds of milk and 180 pounds of butterfat. He believed that a reasonable and profitable standard of production in Colorado is 7,500 pounds of milk and 300 pounds of butterfat.

He cited me a case mentioned in the September, 1942, Dairy Herd-Improvement Association Letter, issued by the Bureau of Dairy Industry of the USDA. The case involved a dairyman with 20 cows producing an average of 200 pounds of butterfat per year. If this man had 11 cows averaging 300 pounds of butterfat or eight cows averaging 400 pounds, he

(Continued on page 213)

S. S. SUTHERLAND

R. W. GREGORY

Professional

Agricultural Career Education in the United States at Dirt-Farmer Levels—1621-1942 Topical Chronological Key

RUFUS W. STIMSON, D.Ed., Supervisor Emeritus of Agricultural Education, Massachusetts, Research Collaborator in Agricultural Education, U. S. Office of Education

*America Was Discovered First in 1492
and Has Been Again in 1942*¹

To the Gentle Reader

HIGHLIGHTED in this topically arranged chronological key are factors which have affected education aimed at the establishment of youth and adults in pleasant and profitable farming and in soul-satisfying rural community life in the United States of America.

The periods covered are three:
THE COLONIAL ERA, 1621-1799
THE ERA OF TERRITORIAL EXPANSION, INVENTION, RESEARCH, AND A NATIONWIDE ADVENTURE IN LIBERAL AND PRACTICAL EDUCATION, 1800-1899

THE ERA OF DETERMINED SCHOOL AND HOME FARM CO-OPERATION: IMPORTANT BEGINNINGS, AND FORTUNATE TRENDS, 1900-1942

Only headline, byline, and thumbnail records, like those on the front page of a metropolitan newspaper—with references to other pages where, as a rule, more detailed accounts may be found by the reader—are herein presented.

Included by request, is a preview of the first book in the following list of references. To the compilers of that "History . . ." 170 co-operating contributors sent more than 5,500 typed pages of officially authenticated data from 48 states, Hawaii, and Puerto Rico. Closing a report of progress, prepared on the request of Editor Byram and published in the December, 1940, number of our magazine, *Agricultural Education*, this compiler said: "We greatly hope, of course, that when our book is done, all readers will find it an accurate, interesting, historically priceless, and useful educational possession."

The page proof of that book has been plated, with a 1942 date line, by the U. S. Government Printing Office, Washington, D. C.; but its publication is being delayed by printing priorities, because of our part in the present global war. This preview, in fact, is included as a kind of "Thank you." It will give each contributor opportunity to glimpse

in advance of publication some of the historical riches so capably and generously recorded by all.

In the preface to his *Spartan Education*, 1942, Professor Edward H. Warren, of Harvard said:

"I shall be 70 next January, and that is a good time to call it a day. When a man's sun sinks below the western horizon and the twilight hours begin, it is natural for him to review his life, to philosophize and reminisce. . . .

"I should be glad to see more young men who are really first-class adopt education as their life-work. . . .

"I believe in discipline. From my boyhood days on, I have sought to discipline my own mind, pen, and tongue. And throughout my service on the law faculty I have sought to discipline the minds, pens, and tongues of the students. I have never suffered fools gladly, and regard such sufferance as mischievous. . . ."

The compiler of this chronology will be 75 next February. Since September, 1897, annual professional improvement has been a practiced principle in his philosophy of education. This chronology is a labor of love, undertaken for the possible assistance of men whose philosophies of education are kindred to his own.

It is true that herein are important headlines which even he who runs may read. It is true, also, that herein are items which may be convenient for those who, at short notice, need to find or to verify the date of a discovery, idea, or event; and to enhance convenience, kindred matters covering more or less widely separated dates have in some cases been brought together under appropriate headings. But primarily this chronology is offered to trainees and to men already engaged in the furtherance of education who are bent on professional improvement, and who may find in it a master key to golden doors into more ample and exact knowledge and many incentives to richly rewarding disciplines of mind, and pen, and tongue.

The figures handled have been so many that it may be vain to hope no error will be found. Since this chronology is to appear soon in a book, any reader who may detect an error will do the compiler a very great favor if he will bring it to the latter's attention at his home address, 10 Kenmore Street, Boston, Massachusetts.

Grateful acknowledgment is made of the compiler's indebtedness to sources

of information revealed in the text and in the following list of references.

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6. *Agricultural Education Magazine*. Published by Meredith Publishing Company, Des Moines, Iowa.
7. *AVA Journal and News Bulletin*. Published by American Vocational Association, Inc., 1010 Vermont Avenue Northwest, Washington, D. C.
8. *Getting Acquainted With Agriculture*. The Interstate Printers and Publishers, Danville, Illinois. 1941.—By George P. Deyoe and Fred T. Ullrich.
9. *Rural America Today, Its Schools and Community Life*. The University of Chicago Press, Chicago, Illinois. 1942.—By George A. Works and Simon O. Lesser.
- N. B. To save space, the above works will be referred to in the following text only by number. Where names instead of page numbers are added, the

¹ Donald Culrose Peattie, in *Boston Herald*, This Week magazine, March 1, 1942; amended by this compiler as of December 31, 1942.

source at the date of selecting the items was available only in galley proof; but these names appear in the final index, and the index will lead the reader with little delay to the narratives cited. A hyphen after a date means "onward."

The Colonial Era—1621-1799

Prime Wisdom: "..... To Know That Which Before Us Lies in Daily Life Is the Prime Wisdom."—John Milton (1608-1674) in "Paradise Lost," Bk. VIII, l. 192

Obstacles, Great and Innumerable

"The earliest farmers in America had to contend with innumerable and great obstacles; with the wildness of nature, the attacks of Indians and wild beasts upon their livestock, the difficulty of obtaining farming implements and seeds, and with conditions of climate and soil, very different from those of the old countries whence they derived all their methods. The colonial farmer was compelled to use the crudest methods. He cut down, heaped, and burned the small trees and undergrowth, belted the large ones. He scratched the surface a little with a home-made plow, and cultivated his corn and tobacco with a wooden hoe. He harvested the crop that nature gave him in a careless manner and used it wastefully. He cultivated the same field until it was worn out, when he cleared another and moved his family near to it. So long as land was so abundant, no attention was paid to the conservation of fertility of the soil. America was such a vast and fertile country that it took the people over a century to find out that there was any limit to its productiveness. These conditions were quite sufficient to explain the slow progress made in agriculture during the first century or more after the settlement of America."—Charles W. Dabney. 1:1-2

Livestock

All forms of domestic livestock except turkeys were at some time imported from Europe. 5:1184

1687 Father Kineo is described by Lockwood in *Pioneering Days in Arizona* as the first and greatest ranchman of the Southwest. He began his work with the Pimas in 1687. Within a decade he had provided the Indians with cattle, horses, sheep, and goats, brought in from missions to the southward. 1: Arizona

1694 Governor Edward Winslow, of Massachusetts, is said to have brought to Plymouth in the ship *Charity* the first meat cattle that came into New England. "It was appropriate that his descendant, Elkanah Watson, should import the first pair of Spanish Merino sheep into Massachusetts, and should then give notice of an exhibition of them at Pittsfield. This small exhibit led to a larger enterprise (1810) and the establishment of stock shows in America."—Dabney. 1:1-2. Cf. 2:12-14 and 47

1793 The first Merino sheep were imported. In the late 1790's the sheep industry began to assume importance in New England. 5:1185

Writings of George Washington show that he had jacks, mares, mules, cattle, and sheep.—Sparks XII: 353

Crops

Plants imported from Europe included

small grains, many fruits and vegetables, fiber plants, timothy, and clover.

Plants borrowed from the Indians included maize, sweet potatoes, tomatoes, pumpkins, gourds, squashes, watermelons, beans, peas, pecans, black walnuts, peanuts, maple sugar, tobacco, and cotton. White potatoes were indigenous to South America. 5:1184. Cranberries were found wild, Maine to Carolinas.

Tobacco was the chief cash crop and principal agricultural export of the colonial South. 5:1184

1793 The cotton gin was invented, paving the way for a tremendous increase in cotton production. 5:1785

Tillage

The wooden plows were crude. For many years all sowing was done by hand. Hoes were used for cultivating. Hay and grain cutting was done with sickles, and threshing with flails. In the last years of the 18th century the cradle and scythe, which had been brought in from Europe, came into wide use. 5:1185

1793 Jefferson tested his moldboard of least resistance. 5:1185

1797 Newbold patented the first cast-iron plow. 5:1185. Rollers were used by George Washington. "Rollers," he wrote, "I have been in the constant use of for many years. . . . passing them over my winter grain in the spring, as soon as the ground will admit a hoof on it. I use them also on spring grain and grass seeds, after sowing and sometimes before, to reduce the clods when the ground is rough." Sparks XII: 332. He also had devised a "barrel plough" or drill for seeding. 2:15

First Agricultural Fairs

1644 "Fairs for the sale of agricultural products, especially livestock, were early held in the American Colonies, following an English custom." At New Haven, Conn., in 1644; Burlington, N. J., in 1681; Rye, N. H., about 1726; and Baltimore, Md., in 1747. Dr. True gives other examples: in South Carolina, by act in 1723; at Alexandria, Va., in 1742; and at Georgetown, Md., when that town was laid out in 1751. "Horse racing and other competitions and the giving of prizes for superior animals were sometimes features of these fairs." 2:17-18

Land Sales and Tariff for Public Revenue

1780 Sale of public lands was one of the money-raising devices resorted to by the newly formed states. Land speculation resulted. 5:1184-1185. October 10, 1780, Congress passed a resolution that the western territory ceded by the states should be disposed of for the common benefit of all the states and that the manner and conditions of the sale of these lands should be exclusively regulated by Congress. 2:20

1789 The first tariff act, for revenue only, was passed. 5:1184

Rural Unrest

"Rural-urban antagonisms had their roots in the colonial period in the conflicts between the politically powerful commercial interests of the cities and the self-sufficient farmers of the hinterlands." 5:1184

1786 Shays's Rebellion. Western Massachusetts farmers revolted

against deflation and the financial policies of their Boston creditors. 5:1184

1794 Whisky Rebellion. Western farmers revolted against a tax on grain in the form of whisky. 5:1185

First Public Funds for Education

1636 **First State Aid.** When Harvard College was founded in 1636, the Massachusetts legislature agreed to give 400 pounds sterling. This was "the first time 'the people by their representatives ever gave their own money to found a place of learning.' For some reason this money was not paid to the college but later it received the income of a ferry and direct grants of money." 2:20

1639 **First Local Aid.** "The first school in North America to receive public funds by vote of the town was established in Dorchester, Mass., in 1639." January 1, 1645, Dedham, Mass., in town meeting, voted unanimously to raise 20 pounds sterling for the maintenance of a free school. Monroe, in his *History of Education*, says:

"Many of the New England schools received their support from a variety of sources, such as the sale or rental of public lands, rental from fish weirs, from ferries, from bequest and private gift, from subscription, from local rates, and in nearly all cases from tuition of students." 2:19

1647 Massachusetts Bay Colony in 1647 "passed a general law requiring that an elementary school should be established in every town of 50 families, and a Latin school in every town of 100 families. A similar law was passed by the Connecticut Colony in 1650. On this basis many schools were established in the New England Colonies during the next 100 years." 2:19

1785 **First Federal Aid.** The resolution of 1780 above mentioned was followed by the ordinance of 1785 which reserved from sale "lot No. 16 of every township for the maintenance of public schools within the said township." "The importance of this provision was not recognized at the time, but it established a precedent of far-reaching influence in later years and marks the beginning of a policy of using public lands for public education. The ordinance of 1787 for the government of the Northwest Territory contained the declaration that 'religion, morality, and knowledge being necessary to good government and the happiness of mankind, schools and the means of education shall be forever encouraged.'" 2:20-21. "Outside of New England support of education with public funds was chiefly confined to the higher institutions, and the establishment of general systems of public schools was long delayed." 2:79

Beginnings in North American Education

First Steps in Education for Establishment in Successful Rural Community Life

In the early years of the Colonial Era Massachusetts was a pioneer in popular education. In later years "her development has been a part of the larger national movement." 3:3

1635 First Latin Grammar Schools: Boston, 1635; Charlestown,

1645 1636; Salem, 1637; Dorchester, 1639; Ipswich, 1641; and Rox-

(Continued on page 211)

Methods

G. P. DEYOE

Readjustments in the Teacher Education Programs to Meet the War Situation*

O. C. ADERHOLD, Professor of Vocational Education, The University of Georgia

THE readjustments in the teacher education programs are a part of the readjustments being made in all phases of college and university work. The problems involved in training teachers of vocational agriculture, especially the pre-employment education of teachers, must be dealt with in light of the adjustments made in college and university programs. In many instances "speed-up" programs have been initiated by teacher-training institutions; standards of admission have been lowered and graduation requirements changed. These institutional changes have affected the readjustments in the teacher education programs in almost all the states.



O. C. Aderhold

Readjustments in Teacher Education Programs

In order to discover what readjustments have been made a request was sent to each state, asking those in charge of the teacher-training program to indicate readjustments that have been made or are in the making. More than two-thirds of the institutions concerned with teacher education sent a list of the readjustments that have been made. These came from all parts of the United States and, I believe, represent a good cross-section of teacher education programs that are in operation in the United States today.

Pre-employment Training

In the pre-employment training of teachers there are three major activities: (1) selecting trainees, (2) training those selected, and (3) placing those who are trained.

Selecting Trainees

There have been some interesting innovations in selecting prospective teachers of agriculture for training. The emphasis in selection has been from young men in college to older men who have either finished an agricultural college or who have had some training in technical agriculture. There is universal agreement that few trainees, for the duration, will come from the ranks of young men in college, because this source is being exhausted by the armed services. The following statement represents the situation in most institutions reporting on this item: "There are no trainees available from which to select. For the past several years,

we have enrolled 40 or more seniors, but now we have only five. Next year there are fewer in prospect."

Many institutions made an effort during the summer and fall to get older men with farm experience and technical agricultural training into the teacher education program. Two states experienced some success in getting such trainees. One state will give limited professional and technical training to about 20 men this year. Another state will get some dozen or more men during the year from this older group.

Many institutions made a greater effort than usual to get trainees. Some institutions enlisted the aid of the agricultural teachers and in addition developed and distributed much printed matter. The results were disappointing. Some teacher-training departments lowered standards to the point of taking any one who applied. One state dropped the five-year teacher-training plan. One institution put in a course in guidance for freshmen with the hope of getting more men. One institution made a definite effort to get physically handicapped young men in college to enroll in teacher education programs.

It may be concluded from the several reports examined that there are no longer young men available to train as teachers of vocational agriculture. Efforts to secure young men with handicaps for training have produced few prospects. Two or three states have been successful in recruiting older men who have had some agricultural training.

Training Those Selected

A. Professional Program

The professional program in a majority of the institutions reporting has been changed to place emphasis upon problems that have emerged as a result of the war. In most cases the general pattern of the professional program has not been changed. Specific courses have been reorganized to place emphasis upon certain war problems, and in a few instances new courses have been added.

Most institutions are now placing emphasis upon the part-time and adult phase of the teacher education program. Some are including the problems involved in training women for agricultural jobs. New activities are being included in the F.F.A. programs—scrap collection, buying bonds and stamps, rationing, etc.

One institution is now scheduling all professional training in one quarter, while another is using two full quarters for the professional experiences. In many cases the professional and technical programs have been shortened as a result of the "speed-up" in colleges.

There seems to be a tendency on the

part of many institutions to shorten or eliminate altogether practice or apprenticeship teaching. In these schools the pressure for teachers is given as the reason for such a change. In institutions where men are being placed without practice teaching, the teacher-training departments are following up the new men with much more intensive supervision than formerly.

In a few situations where practice or apprenticeship teaching is done, the travel for such work has been greatly reduced. In one instance the travel was reduced from an average of 1,000 miles to 100 miles per trainee.

Radical changes have been made in the program in the two or three states that have been successful in securing older trainees who have completed college work but who need training in the professional aspects of the job. These institutions are giving from two to six weeks courses which include problems involving all phases of the vocational program—all-day, part-time, and evening. In one state where non-college graduates were allowed to enroll, the professional training was limited to work with adults. The administrative plan in this state is to use these men for adult work and for operating school facilities such as shops, canning plants, dehydration plants, and the like.

Practically all states are stressing the organization and supervision of OSY classes as a part of the professional program. Some institutions have added courses dealing with "Education and War."

B. Technical Courses

There have been few changes in the technical courses. The readjustments that have been made are of two kinds: (1) Many states have increased the emphasis upon shop courses. More shop courses are being required of trainees, and in a few cases students are encouraged to elect other shop or engineering courses. In some cases trainees are allowed to substitute mathematics for agricultural courses. (2) The other type of adjustment has been in the organization of short, intensive technical courses in shop, horticulture, community canning, and commodity courses. These courses have been organized for the older group of trainees who have been out of college for some time. They are in the nature of "refresher" courses.

One gets the feeling from reading this phase of the reports that the technical staff, especially in agricultural engineering, is becoming more sensitive to the problems faced by teachers of vocational agriculture and is more concerned with

*Paper presented to the agricultural education section of the American Vocational Education Association, Toledo, Ohio, December 3, 1942.

adjusting the instruction to the needs of agricultural teachers. The great increase in the number of short technical courses for both pre-service and in-service teachers is evidence of this trend.

Placing Those Who Are Trained

The uniform and almost unanimous answer to the question of placement was that the trainee was being employed before he finished his training. The typical answer was, "There are ten jobs for each trainee. Our problem is to keep the trainee until he finishes."

In-Service Training of Teachers

Those responsible for the teacher education program are almost without exception increasing the in-service phase of training. The reduced number of trainees for pre-service training has made it possible to expand the program for upgrading teachers on the job.

Conference for Teachers

The reports indicate that more conferences with teachers are being held and that such conferences are for longer periods. In several states the annual teachers' conference was increased by one or two days to give special assistance to teachers in both the professional and technical aspects of their jobs. In some few cases the state conferences were abandoned in favor of small group conferences.

In those states where older men have been brought into the work, replacing young teachers who have dropped out, many conferences of two to three days have been held.

Graduate Courses

Almost without an exception the graduate program has been abandoned or greatly reduced for the duration. There were only one or two institutions planning graduate work in the professional field. Some three or four departments will continue to give graduate courses in technical subjects, such as farm shop.

Professional Short Courses

The professional short courses like the graduate program have been abandoned for the duration. There are practically no institutions offering professional courses for credit. On the other hand, there is evidence that a majority of the departments are giving professional courses on a non-credit basis thru short group conferences and thru individual follow-up.

Technical Courses

The reports indicate a great increase in technical courses, especially courses of the "skill" type. Many institutions are planning shop, canning, dehydration, and other such courses for the summer.

The reports from some few states suggest that the short technical courses usually given at the college will, this year, be given in selected high-school departments in the state. Short courses of two to four days are being held in shop and dehydration in one state.

Follow-up

The follow-up program in almost every state is being greatly expanded. In some states the entire teacher-training staff is spending a majority of its time in following up teachers. The states employing older men who do not meet certification requirements are calling upon teacher-trainers for special efforts with this group.

Providing Teaching Aids for Teachers in Service

This study reveals that practically all the teaching aids being developed are for the OSYA teachers. It is probable that some of these aids are being produced for both the regular and OSYA programs but in almost every case the reports suggested that all materials being produced were for OSYA; Mr. Hall will report on the program as it relates to OSYA.

Readjustments in Programs to Improve College Teaching

Reports from the several states indicate that there is little organized effort to improve college teaching. Adjustments in this realm have been away from a program to improve college instruction. Three or four states indicate that teacher-trainers are working with members of the technical staff in organizing the college curriculum and in methods of teaching.

It is possible that readjustments in this area have not resulted in so great a reduction as indicated in the reports, because many reported that the technical staff was becoming more aware of the problems of agriculture teachers and was building technical programs to meet these needs, especially in the field of farm shop.

Readjustments in Programs of Research

The following is a typical statement on readjustments in research: "A rather ambitious research program was started last year but because of the demands of the emergency, this project has been sidetracked for the present." Most states have apparently abandoned organized research for the duration. The two or three states that are exceptions to this statement are doing studies in curriculum, services of teachers in getting available labor and needy farmers together, and OSYA programs.

Summary of Readjustments

The readjustments in teacher education may be summarized in the following statements:

1. The military services and war industries are absorbing the young men who normally would go to college and prepare to teach vocational agriculture. There are practically no young men available for training. The pre-service phase of teacher education has almost been eliminated.

2. A few states are finding a limited number of older men who have had technical training in agriculture and who want to get into teaching. These states are readjusting their training programs to give intensive training in both the professional and technical field to these men.

3. Professional courses have undergone little change except to place emphasis upon problems growing out of the war. Professional courses for older men entering the profession have been developed in a few states. Practice teaching has been decreased.

4. The technical program has been changed with more emphasis upon shop, canning, and other "skill" courses.

5. The in-service training program has been readjusted to place emphasis upon:
 - a. More teacher conferences.
 - b. State teachers' conferences longer than in previous years.

c. More technical short courses for teachers.

d. More follow-up by teacher educators.

6. There is less emphasis on graduate programs.

7. There seems to be less emphasis upon the program to improve college teaching.

8. Organized research, except in a few states, has been abandoned for the duration.

9. Relatively more emphasis has been placed upon preparation of teaching materials and helps for teachers, especially for OSYA teachers.

Method Used

I have endeavored to present the readjustments in teacher education that have been made or are in the making in vocational agriculture. No effort has been made to treat the reports from the several states statistically. It was decided to study a specific part of the reports and then generalize on that part and continue the procedure thru the reports. This procedure has one serious disadvantage: it does not get the total situations before you. One example will suffice. Approximately 75 percent of the institutions reporting say that they have reduced practice teaching, while about 25 percent say they have increased this phase of the training program. My generalized statement was that teacher education institutions have adjusted their programs to place less emphasis upon practice teaching.

The second part of this paper will contain my personal opinions of readjustments that need to be made in the future.

The Next Step in Teacher Education

It is impossible to see very clearly the direction of teacher education in a war-torn world without knowing the nature and direction of many national and world events that will emerge during the days, months, and years that lie ahead. The progress of the war will make it necessary to change directions many times as we move down the road of tomorrow.

The one major recommendation that I would like to make to those responsible for programs of teacher education is to be ready and willing to make changes, to be sensitive to the every shifting scene and alert to the new situations that must continue to develop as the battles of blood and production proceed.

Below are some of the problems and my opinion of what teacher education must do in the solution of these problems.

1. *The Agricultural Needs*—As the war stretches out over another year, we shall see greater and more specific needs in the field of agriculture develop. Certain enterprises and activities will become relatively more important. More oil- and fat-producing enterprises will be needed. Machinery will be in greater need of repair. Our job is to provide a training program that will produce teachers who can effectively carry on this program and meet this need, especially with adult farmers. This means intensive training for the regular teacher on the job and the many OSYA teachers.

2. *Manpower Needs*—We have thousands of farm boys in our high-school classes. Do they need to be taught to deal with the problems of farming or to be

(Continued on page 214)

Supervised Practice

C. L. ANGERER

Is Long-time Farm Practice Planning Practical?

H. M. HAMLIN, Professor of Agricultural Education, University of Illinois

IN 1931 I secured a copy of a long-time farm improvement program worked out by Glenn Schuelke, a sophomore in agriculture in the high school at Owatonna, Minnesota, under the guidance of his teacher, Ellis B. Clough, now a graduate student at Cornell University. It is the best program I have ever seen, and I have used it since in my classes. Two questions about it have been persistently raised by my students:

1. Could a sophomore have worked out such a fine program?
2. Did he ever do anything about it?

Long-time Program Put Into Operation

I was finally driven by the inquiries of an especially skeptical student to write to Mr. Thomas Raine, the present teacher at Owatonna. Mr. Raine has reported in substance as follows:

Glenn has been managing the home farm for some time, since his father is now dead. He is a member of the Farm Record Association of Minnesota and president of the county rural youth organization. Everything on the farm is kept very neat, and major improvements have been made from time to time. He has brought about many of the improvements which he planned in 1931 in the three enterprises which together provide the entire farm income: dairying, swine, and poultry.

Increases Butterfat

In 1931, the average production of the dairy herd was 284 pounds of butterfat per cow. Twenty-one cows were kept. One-half of the farm income came from dairying. He set an average production of 400 pounds of butterfat per cow as a long-time objective. By 1941 the herd had reached an average production of 315 pounds, with several heifers and second-calf heifers included.

Pork Production Increased

Altho pork production was a major enterprise, furnishing 35 percent of the farm income in 1931, the average production of pork per sow was only 1,050 pounds; the average litter size was six; and the average weight at six months was 175 pounds. He set his objective at 1,800 pounds of pork per sow. There have been years when this objective was reached and years when it was not quite



H. M. Hamlin

reached, but in the main this objective has been attained.

More Eggs Produced

In 1931 poultry provided about 15 percent of the farm income. The production of eggs per hen was not given in the original plan and probably was not known. Glenn proposed them to develop a flock producing 225 eggs per hen per year. Last year the flock average was 186. A new Minnesota model poultry house was built in 1941.

Reaches Goals in Other Enterprises

In the years preceding 1931, the farm had grown 25 to 28 acres of corn per year, producing 40 bushels per acre. The recent

average over a period of years has been about 55 bushels. His 1931 objective had been to reach 50 to 55 bushels.

About 30 acres of small grains (mixed oats and barley) were grown at the time the plan was made. In 1930 the yield had been 52 bushels, and in 1931, 40 bushels. He desired an average of 55 to 60 bushels, which has been reached in recent years.

The farm had 10 acres of alfalfa in 1931, less than one-half an acre per cow. He now has more than one acre for each producing cow, the goal he had set.

In 1931, Glenn reported patches of Canada thistle, quack grass, and other weeds. He has established his aim of eradicating all noxious weeds. All in all, Glenn seems to have done a very good job of "calling his shots."

Copies of the original plan are available to Illinois teachers and to a limited number of other persons from the Department of Agricultural Education, University of Illinois, Room 103, Gregory Hall, Urbana, Illinois.

How to Get Students Into Supervised Practice Programs

W. R. BRYANT, Teacher
Canton, South Dakota

SHOULD I use classroom time for individual and class instruction on the supervised practice program? Is the supervised practice program a vital part of the vocational agriculture program? What should be the objectives? These and many other questions confront the vocational agriculture instructor each year. I am submitting some of the ways in which I have met these problems in my own department.

My experience has led me to believe that classroom teaching, without bringing into it the supervised practice program, develops into just another academic subject. The teacher himself must be thoroughly sold on the program. The best way to become a believer is to direct the supervised farming as to make it pay dividends. This cannot be done in a year or two years' time. It develops over a period of years, which is one more reason for teachers to stay on the same job long enough to produce results. I have been teaching nine years, three years at my first job and six years at the present one. I am therefore in a position to say that one must see his project program as it develops year after year.

Students Want Projects

I do not push supervised practice at my students—rather, I let them take it from me. In this way they feel as if it is theirs. When first-year boys come into my department, they are handled with gloves, so to speak, in regard to project programs. They are told, in the course of

time, of the older boys' achievements in supervised practice work. The point is finally reached where the new boys are inquiring about their own possibilities. Here is where one must be acquainted with the boys' home conditions, because in some cases a "bum steer" is just like throwing a wrench in a hammer mill.

Never in my teaching career have I insisted that a boy increase the scope of his farming program, for it must be remembered that these boys are young and profit more sometimes on a smaller enterprise. There are always opportunities in the long-time program for the boy to expand his farming activities. My experience has been that to start a boy on small units and let him increase his own program makes in the end for a better program and a better boy.

Projects Experimental

I had one boy enter the department a few years ago who seemed very much interested in hogs but insisted that they could not be raised on his farm. After a study of the situation, we decided to let him try it on a small scale. He went to his grandfather, who had an average herd of hogs, and secured one gilt. By practicing a few sanitation methods, the boy raised a good litter. This gave him some confidence. The next year he saved and used the gilts from his first litter and bought enough more so that he had 12 gilts to farrow. He raised a fraction over nine pigs per litter. The father, seeing that it was possible to raise hogs on the farm, took the herd over for himself, which the boy agreed should be done. I believe this boy did more for that farm than he could have done by expanding his program into other fields. In other words, there are situations where concentration on one enterprise is better. The condition in this case was unusual. The boy was not interested in getting

Supervised Project Program

C. N. DeHart, Teacher, Greenview, Illinois

THE supervised project program of a vocational agriculture department is what makes the course vocational. I feel that a department with a weak supervised project program is not truly vocational. A vocational agriculture department will go ahead, thrive, and be respected, even with mediocre classroom teaching, if the supervised project program is what it should be. On the other hand, a department will lose interest of the students and respect of the community, and even fail if the project program is not sound.

Characteristics of Good Program

There are several characteristics of a sound project program: (1) large enough to be practical, and to get and hold interest of the boy, (2) adapted to the farm and to the boy, (3) demonstrative, (4) capable of growth, (5) giving responsibility and planning experience, and (6) profitable.

In starting the individual boy's project one must consider several things. The boy's preference, of course, is most important, as he will usually do better work with those things in which he is interested. The amount of capital he can invest, relation to home farming program as affecting use of pasture, improvements, and feed, parents' preference, and the chances for enlarging are all things to consider in helping start a project program.

Livestock Projects

I feel it is most important to get acquainted with the parents, the boy, and the situation at home, and to allow acquaintance with you.

Livestock projects are probably best to hold interest and allow growth in the boy and project. Since hogs are the most important class of livestock in my community, I have tried over a period of seven years to get hog projects started. We now have 83 percent of our boys with hogs as a major or minor project. Hogs, of course, would not be the one project to stress in

a start in farming himself but did like hogs, so it seemed the logical thing to do.

Diversified Program

Most of the boys in my department, however, do not center on one enterprise, chiefly because we are in a general farming area. One boy living on a farm which gave him limited opportunity as far as scope of each project was concerned, has increased his program to where the past year he has had sow litters, barley, flax, corn, chickens, millet, and a milk cow. This boy intends to farm and so is getting experience in many fields, even tho each is small.

The boy and his home conditions are always studied before advice is given to him. I have another boy who is interested in purebred stock. His first year he selected a purebred Hereford gilt. There were no other Hereford hogs in our territory. He did such a fine job that his dad has switched to purebred Herefords and has given the boy management of the

some communities. It might be dairy, poultry, or some other. The most important enterprise in the community, it seems to me, will allow more constructive learning and growth, and is usually most practical.

In starting the boy in his project work, get him started in a long-time major project of community importance, enlarge that each year, and build in minor projects as he proves able to care properly for them. A good project plan for a boy in my community would be as follows: freshman year, one sow and litter; sophomore year, two or three sows and litters, and a beef or dairy heifer; junior year, four sows and litters, two heifers, and five to 10 acres of corn; senior year, six sows and litters, two heifers and calves, 10 to 20 acres of corn, and possibly another project. Beef steers, another crop project, sheep, or poultry might be added in the junior or senior year if the student is capable of caring for all efficiently.

It is much better to start with a small program and build up than to start with a large program and let it drag along without proper results. It is also better to have one good project than several poor ones. If you have good programs started with the older boys, it is much easier to get your younger boys started, because they know of these good programs before they come to high school and are anxious to start for themselves. That is where the teacher going into a new department or a department that has a good project program has the advantage over one going into a department where the project work has been neglected.

Projects Induct Boys Into Farming

Good project programs lead boys into farming more quickly than anything else. Our department is just seven years old, so our graduates are between 18 and 26 years of age. Naturally quite a few are in the armed forces, 24 percent, to be specific, and several are not yet of military age. However, we have 11 percent farming for themselves, 22 percent working on home

entire herd. The boy has his own part of the herd but assumes responsibility of his dad's also. In addition he is raising corn and barley.

I mention the above examples to show how I use a boy's likes and dislikes in helping him to plan his program.

I use no unit or point system on projects because I feel that it is not a unit or a number of points that a boy should strive for, but rather for a superior enterprise. I spare no praise for good projects. It gives a boy new ambition to have himself praised before his class and community. I never make a practice of telling a boy that projects are required but rather let him see the possibilities of a program for himself, and in most cases boys are eager to practice what they have learned.

I use a lot of classroom time on project planning and analyzing. There is a lot of good teaching material, and it is close to home. The supervised farming program is a large part of vocational agriculture, and more emphasis should be put on it.

farm, seven percent working on other farms, five percent going to agricultural colleges, five percent graduated from agricultural colleges and now in army besides the 24 percent already mentioned, 11 percent working in defense factories, and 15 percent working in various non-agricultural occupations. If times were normal I would estimate that 70 percent would be working in agricultural fields.

What makes an individual boy's project good? How do you get good hog projects? Where do you get your hogs to start these projects? These are questions sometimes asked concerning our hog projects.

Getting Boys Started

I never ask a boy to pay a large price for a gilt. A \$35 to \$45 gilt with sanitation practices and a balanced ration will produce much better pigs than a \$100 gilt where you are lax in sanitation and feeding. We buy 90 percent or more of our gilts in our own community. The purchase of boars from the other vocational boys is also practiced where blood lines are not too close. There is not any doubt that, to be successful year after year in any project program, the supervisor in charge must have a practical knowledge of selection of animals plus a knowledge of sanitation, management, and good feeding.

We have never had trouble getting rid of our boars and some gilts for breeding stock; we sell about 60 head per year at an average price of \$5 to \$10 over market price, and in many instances much higher. Whenever a boy is offered \$75 to \$100 for a four or five months' pig, I tell him to sell and raise more like him from the same sow bred to the same boar. If your project program is well enough advertised, you will never have salable livestock left on your hands.

Credit

If credit is needed to start a project, and it many times is, we use the Springfield, Illinois, Lions Club Loan Fund or the Production Credit for larger loans. I do not like for boys to borrow more than the price of a gilt to start with. When they have collateral, it is all right for them to borrow larger sums. A boy should not borrow any more than he can see his way to repay. If they have to borrow, I like to start them in a project with a quick income.

Project tours and judging practice both aid in the development of good projects, because the boy is better able to select breeding stock and also to judge the progress of his animals and project. Some say that livestock judging is a guessing game, but I would say it is no more a guessing game than teaching school or doing anything else. Boys and schools who win consistently year after year in judging work cannot be classed as lucky, since luck is not consistent. The project tours allow boys to become acquainted with the programs of the several boys in school and to measure the progress of each other's work.

As I have already mentioned, the project program, to my way of thinking, is the most important phase of vocational agriculture. With it, you put to work the theory, ideas, and practices learned in the classroom, and with it you help start a boy in the vocation of farming.

Farmer Classes

E. R. ALEXANDER

W. H. MARTIN

Georgia Communities Dehydrate Foods

T. G. WALTERS, Supervisor, Atlanta, Georgia

IN THE summer of 1942 the Georgia Division of agricultural education began a study on the development and adaptation of equipment and procedures for dehydrating Georgia fruits and vegetables. This study was conducted in co-operation with the Tennessee Valley Authority and the Georgia Agricultural Experiment Station.

Dehydrating plants of 50-bushel capacity were constructed at Forsyth, Clarkesville, Vienna, and Sparta in connection with community canning plants. The purpose of this study on food dehydration was to determine the possibility of converting the 350 community canning plants in Georgia into food dehydrating centers if tin cans are not available in volume equivalent to that of 1942.

Four Experimental Plants

The four dehydrators built were of the cabinet type—size 4'x10'x16'—designed by the Agricultural Engineering Division, Commerce Department, T. V. A. They consist of two parts: (1) heating tunnel containing heating units, fan, and air intake dampers; and (2) drying tunnel containing four trucks holding 18 three-foot x four-foot trays each, four entrance doors, and air exhaust dampers. Circulation of the air is accomplished by



T. G. Walters

means of a centrifugal fan. Heat is supplied to the dehydrator by means of a Fin-type steam coil. The canning plant boiler furnished the steam for heating the unit.

Over 18 kinds of fruits and vegetables were successfully dehydrated during the season of 1942, with a total volume of over

50,000 pounds (fresh weight) at the four community plants. At the Clarkesville plant 115 farm families dried products in the 80 days the plant operated. Some of the products dehydrated were peaches, pears, beans, peas, sweet potatoes, apples, okra, and cabbage.

The drying time of various products ranges from 10 to 16 hours. The saving in storage facilities of dehydrated products over fresh or canned products is an outstanding feature. For instance, at the Clarkesville plant, a bushel of peaches



Miss Lil Baldwin, home economics teacher, Clarkesville, examining trays of peaches ready to go into the dehydrating plant



Dehydration unit inside community dehydrator plant at Clarkesville

after dehydrating weighed 4.24 pounds, and a bushel of green beans weighed 2.67 pounds. All products after drying were placed in moistureproof Cellophane bags and completely sealed.

Farmers using the plants were charged from four to six cents per pound for dehydrated products plus cost of containers used. Number three Cellophane-lined paper bags were sold to farmers at two and one-half cents each. The total cost of dehydrating and packaging a bushel of peaches was approximately 30 cents. To have canned this bushel of peaches would have cost approximately 80 cents.

Dehydrated Foods Are Good

The real test of any food products is in the eating. A few statements from leading people of Monroe County, Forsyth, Georgia, will give some indication of the quality of the product.

G. P. Whatley, college teacher, says of dehydrated figs, okra, and peaches: "Of course, you know we run a boarding house, too, and our boarders just rave over dehydrated food. It saves space,

Project Selection and Planning

H. B. Hanson, Teacher
Redfield, South Dakota

THE supervised farming program of the boy in vocational agriculture may be the key to his success or failure in this phase of his education. It is well that we give this phase of the program much consideration both in and out of the classroom.

I have found that several points must be considered in order to encourage the boy in the selection of his farming program. They are:

1. The enterprises most common in the area
2. The likes and dislikes of the boy and his parents
3. The start that the boy may have in his supervised practice program
4. The outlook for the crops and livestock suited to the territory based on market reports, government reports, the feed supply on hand and available
5. The cash available to the boy, either his own or from other sources
6. The type of farm and equipment on which he is to carry on his farming program
7. Opportunity for securing land and livestock on share basis

In planning, and this too is the job of the individual instructor, each boy should be considered as a prospective farmer in his own community until he is definitely out of the field. With this in mind we should work toward a long-time program for each boy, starting early in his first year in the department. Work with the boy in setting up a tentative program for from four to eight years, and provide some stimulation for increasing the enterprise already started as well as expanding into other enterprises.

gives variety, and is economical as well as convenient to use. It also saves cans and sugar. It is very necessary in the food-saving program for our family and just as important for the community."

Mrs. Katherine B. Sutton, county school superintendent, says of dehydrated peaches: "They are very delicious. The whole family is simply crazy about them.



L. E. Nichols, agriculture teacher, Clarksdale, with a bushel of peaches before and after dehydrating. Weight, before, 50 lbs.; after, 5 lbs.

The parent must always be kept in mind, as here may lie the reason for the success or failure of the supervised farming program.

The trio—the boy, the parent, and the vocational agriculture instructor—working together will accomplish desirable results for the boy.

Agricultural Career Education

(Continued from page 205)

bury, 1645. Cheever's *Accidence* the noted text. Transfer of English secondary schools to fit for universities. Forerunners of American secondary schools. 3:3

1636- Harvard College, founded in 1638 in Cambridge, Mass. Four hundred pounds voted by General Court. Library and one-half estate from John Harvard. To provide educational leaders, ministers, and teachers. Influence of Cambridge, England. 3:3

1642 First School Law. Universal education in homes. Enforced by selectmen. "To train all children in learning and labor." "Profitable to commonwealth." A civic aim. 3:3

1647 "Mother of all school laws." Massachusetts School System: (1) Reading and Writing Schools; (2) Latin Grammar Schools.

1683 Two of each in town of 500 families. Six principles of popular education: (1) Universal Education; (2) Parental Obligation; (3) State Enforcement; (4) State Standards; (5) Public Taxation; (6) Higher Education. Schools of Three R's. Dominant textbook for a century *New England Primer*. 3:3

1700 "Moving School" started to meet demand for equalization of school privileges. Led to creation of

Every family should make every effort to have dehydrated food in its food-saving program. And our community could not do without this method of food saving since we have learned its value."

J. K. Zellner, farmer and member of the county board of education, says of dehydrated peaches: "I would rather have this method of saving food than canning. The food is good, economical, and easy to store. It is very important that every family should dehydrate lots of food. Our community needs this plant for the preservation of food."

Miss Marjorie Strickland, teacher of home economics, comments: "I think that when more people have used this method, we can tell more about how well it is liked. But speaking from a dietary standpoint, I do think it is a very necessary part of the family food program. Since cans may be short in number, we will have to supplement our community canning program. Also, during this war people must use every way possible to make their food at home."

W. R. Moseley, teacher of agriculture, points out: "Our community could not get along without a dehydrating plant. It is just as important as our cannery. This unit would be a very valuable piece of food-saving equipment for every vocational community in our state. Our supply of cans for canning this year may be seriously cut in number. In this case, we believe the community dehydrator is the best canning supplement now known."

permanent school districts. 2:19

1701 Certification of master by committee of ministers. First compulsory certification. Germ of school committee. 3:4

1763 Academies began to replace Latin grammar schools. Endowed. Tuition. 1763, Dummer; 1778-1780, Andover; 1784, Leicester and Exeter (N. H.). Transfer of secondary schools attended by English dissenters (Milton's Tractate). Need for practical schools for non-collegiates and collegiates. 3:4

1780- Webster's Readers and Spellers. Civic ideals thru reading books. 3:4

1784 Morse's *Geography*. 1785, *Elements of Geography*. First American geography. Growth of American commerce. 3:4

1789 Massachusetts School Law: 50 families, Reading and Writing School; 200 families, Latin Grammar School. Legalized district system. Official supervision of schools. Code for moral instruction Secular textbooks: Webster's *American Speller* (1785); Pike's *Arithmetic for Americans* (1788), Bingham's *American Preceptor* (1789). "American schools by the people, for the people." "Education the cornerstone of citizenship." Religious purpose replaced by civic. "Boston center of book publication." 3:4

1797 Massachusetts state law incorporating academies. State aid. "Tuition academies became part of state system. Practical education for leaders." 3:4

First Steps in Education for Establishment in Successful Farming

Aborigines First Taught Agriculture

1621 In Massachusetts. Squanto, a friendly Indian, taught the Plymouth Plantation settlers to plant corn with a fish in each hill. Morton is quoted by William Bradford as recording: "You may see in one township a hundred acres together set with these fish . . . every acre taking a thousand of them: and an acre thus dressed will produce and yeald so much corne as 3 acres without fish." This first lesson long has been brought to mind annually by a public celebration in pageant presented by the Plymouth schools aided by citizens. 1:178

1778 In Hawaii. When Hawaii was discovered, a population of 300,000 was found on the island of Kauai, supported by an advanced agriculture self-taught by the natives. 1:113

1790's In Indiana. The first agricultural teaching in Indiana is traced in the late 1790's to Chief Little Turtle, of the Miami Indian Nation. 1:130

1793 In Georgia. Tomochichi, King of the Yamacraws, taught Georgia settlers how to grow maize, beans, pumpkins, melons, and fruits of several kinds. "The first harvest showed an abundance of food, including 1,000 bushels of corn." 1:88. Mary Musgrove, the Indian wife of a South Carolina planter and a former member of the Yamacraw tribe, was employed as interpreter and paid 100 pounds for her services per annum. Whether or not Tomochichi was paid is not known.—Dr. John T. Wheeler, University of Georgia, in letter September 15, 1942, to this compiler

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Farm Mechanics

L. B. POLLOM

Organizing and Conducting OSYA Courses

L. M. SASMAN, State Supervisor, Madison, Wisconsin

WITH severe farm labor shortages, the curtailment of the manufacturing of new farm machinery, coupled with the increased demand for more and still more crop and livestock products, has made it possible for vocational agriculture departments to do something really worth-while towards winning the war. Practical courses in woodworking, tractors, trucks and automobiles, farm machinery repair, and production are enthusiastically received by farmers if organized to suit their needs.



L. M. Sasman

Explaining Program to Farmers

Two methods used in explaining the program were (1) articles in the local papers and (2) contacts thru the instructors, businessmen, high-school students, and agricultural instructors. Below is the article which launched the program leading to an enrollment of 117 trainees in nine courses at the end of the second month.

Great Opportunity to Farmers

An excellent opportunity for farmers to learn to repair all kinds of farm machinery, and even to get their own machinery put into first-class condition,

may develop if the farmers of the Spring Valley area show that they are interested.

Most farmers have already found out that it is almost impossible to buy new machinery, or to get parts to repair broken machines. Replacement parts can still be secured, providing they are ordered in plenty of time to allow busy manufacturers to make delivery.

The plan offered by the Spring Valley vocational agricultural department is, briefly, this: A building adequately heated, 50'x100', may be rented; a full-time farm machinery mechanic to work five days each week and nine hours each day may be hired, his job being to do repair work himself, to instruct others, and to order new parts. The high school will furnish all necessary tools and equipment.

A farmer may bring any number of machines that he wants repaired and with the help of the mechanic, hired man, son, or others taking the course, he will



Instructor Sam Martin is helping Fred Falde and his son Harlan assemble the clutch in their 15-30 tractor. Harlan is an American Farmer and expects to use the completely overhauled machine on his farm



Instructor Sam Martin, left, is explaining to Art Maher how his corn planter may be repaired. A fertilizer attachment will be added to this machine

put the machine into good working condition.

The only cost to the farmer will be the cost of new replacement parts.

Men attending these machinery courses will attend as many days a week as they wish, and spend only as much time as they wish in order to get the job done. There is no age limit.

In order to carry out a program of this kind, the number of farmers willing to do their bit to produce as much food as possible and keep machinery in a condition where they can plant and harvest the necessary crops must be known. If you farmers and farm boys are interested in this opportunity, send a card telling how many will be willing to come to Walter L. Hansen, Instructor in Agriculture, Spring Valley, Wisconsin.

It is necessary to have at least 40 farmers enroll. Unless those willing to take the course notify the agriculture instructor within 10 days, plans for this course must be dropped. So send your name in NOW.

If there is sufficient interest, a meeting will be called some time within the next

Editorial Comment

(Continued from page 203)

would have the same income over feed costs; and 10 of the latter cows would have given the same production as the 20. Why milk 20 cows when 10 will do the same job?

Similar situations are easily to be found in other fields of agricultural production. I cite two more instances:

(1) In an article in a recent issue of the *Country Gentleman* I ran across this statement:

"Possibly 20,000,000 baby pigs died last spring (1942). Perhaps 10,000,000 will die in farrowing this fall. Millions of others, born sound and healthy, will become runts because of improper care in the first eight weeks."

(2) The technical man in charge of beef production at the college informed me that the calf crop in beef cattle in Colorado is only about 70 percent, while a 90 percent calf crop is a reasonable standard.

I could continue to enumerate many other situations. Enough have been presented, however, to illustrate some important facts I want to call to the minds of teachers of vocational agriculture.

First, more efficient production practices will enormously increase production. Second, losses due to diseases and poor management can be greatly reduced. Where this is done, production will be increased without increasing the scope of the enterprise. Third, if the average individual producer everywhere will carefully analyze his utmost possibilities of making use of recognized standard practices, and then will put conscientious effort into carrying out these practices, much of the desired increase in the production of the critical foods, so desperately needed in the present-day world, will be attained.

Food production requirements will be met only to the extent that each producer and each community does its full share. It is essential that the producers have a wholehearted desire to produce to their utmost capacities, as efficiently and economically as possible.

The teacher of vocational agriculture is one of the agents whose war job is to help, thru his leadership in his individual

community, to bring about this increased production of needed foods. The OSYA program is a means to this end. To work harder and to work more closely than ever before with practical farmers on food production problems is the challenge of today to all teachers of vocational agriculture throughout our great nation. "Food will win the war." May the teachers of vocational agriculture not fail to do their full part in helping to win it. G. A. S.

render another service as the opportunity presents itself.

One reason for teaching this course is to give students the information necessary to enable them to avoid making many of the mistakes that have been made and are still being made by people who have already moved to part-time farms. The local bankers and people who have "been thru the mill" are good sources of information. The question "If you were going to do it all over again, knowing what you have now learned from your experiences, would you do it any differently?" will provoke plenty of information concerning what has worked well and what has not.

There is not a great deal of well-organized teaching material available; no suitable textbook has come to our attention to date. The course should doubtless be built around local conditions as the instructor finds them in his own locality. There is adequate bulletin material available on all phases of work which would possibly come into this course.

The course of study we are following includes (1) advantages and disadvantages of living on a part-time farm, (2) selecting and obtaining a suitable tract of land (this includes a study of soil types, credit, land values and what determines them, etc.), (3) maintenance of soil fertility by rotations, good farming practices, use of commercial fertilizers, etc., (4) gardening, (5) livestock suitable to a small acreage, (6) marketing of surplus products, (7) maintenance of improvements, and (8) landscaping the home grounds.

Mr. Ainsworth, state supervisor of agricultural education, has found that 25 percent of the boys enrolled in vocational agriculture in Indiana live on places of 10 acres or less.

If at the end of a year's study of country living on a small place, a boy decides that his interest was founded on a misconception of actual conditions, his work has hardly been wasted if it saves him the disappointments, discouragement, and expense involved in moving out from town and then back again. It is no part or purpose of this course to sell them on the idea of becoming full-time farmers.

two weeks, and all details will be explained.

Setting Up the Courses

A. Providing Space

Large areas of floor space are needed to run farm machinery courses. There should be from 2,000 to 7,000 square feet of floor space, depending on the size of the program. A local garage with 7,000 square feet of floor space has been rented. This makes adequate room for 10 tractors and 15 to 20 other machines to be worked on at the same time. Renting a blacksmith shop, with the local blacksmith as the instructor, helps to complete all phases of farm machinery repairing.

B. Providing Tools and Equipment

Using tools already purchased from national defense funds; renting tools from garages, machine dealers, and blacksmiths; and encouraging farmers to bring tools from home have solved the equipment problem.

Vocational Agriculture and the Part-time Farmer

A. R. SABIN, Teacher
Goshen, Indiana

A DRIVE around the outskirts of most any Midwest industrial town will convince one of the trend toward part-time farming. The motive for moving varies with different individuals, some seeking one thing; others, something else. Among the reasons most often given are (1) a better place to live, (2) greater financial security, (3) lower taxes, (4) a secure place to invest family savings, and (5) a better place to bring up children.

Goshen, Indiana, is a town of 12,000 population, becoming more industrialized and less agricultural as time goes on. To meet the changing conditions in this particular community, last year a course called "Part-time Farming" was organized as part of the vocational agriculture in the local high school.

Most of the boys enrolled have spent their summer months on the farm of an uncle or grandfather or have lived on a farm themselves until they were eight or 10 years old. This fact partially explains their interest in rural living, even though they have no desire or intention of earning their living as farmers. In a strictly rural community a course such as this one probably has no place in the vocational agriculture program. On the other hand, there are many schools where vocational agriculture is now a part of the curriculum, where such a course can

C. Securing Instructors

Highly skilled instructors are needed. Mechanics from implement dealers, garage mechanics, blacksmiths, and carpenters are available in almost every town, or in near-by towns. It is not necessary to hire a mechanic from a dealer, but usually some arrangement can be made to get the co-operation of the dealer. Sale of parts in repairing several hundred machines makes an attraction which most dealers do not overlook.

Organizing the Courses

D. Schedule of OSYA Courses

Classes in farm machinery are held each day from nine to 12 and one to four o'clock.

Classes in tractors, trucks, and automobiles are held from seven to 11 p. m. each day, and metal classes from nine to 12 and one to four each day. The woodworking classes are held from nine to 12 and one to four each day.

Attendance in day courses runs much

higher than in night courses. Farmers may enroll in two or more courses if held at different hours. Farmers are eager to get their machines repaired, adjusted, and painted. If they understand that being absent prevents other farmers from bringing in their machines, they will attend regularly and consequently finish the job.

Results

After two months of operation 17 tractors have left the shop, 10 are being repaired, and there are 17 awaiting their turn. More emphasis is being placed on tractors than other machines at the present time. Twenty-two plows, four mowers, three corn binders, two manure spreaders, six spring-tooth拖s, one ensilage cutter, and five cultivators have already been repaired. There seems to be adequate machinery to keep three instructors busy for three more months.

Besides getting equipment ready for planting and harvesting, farmers are learning something which will be very helpful in the future.

Studies and Investigations

C. S. ANDERSON

The Eight-Year Study and Its Implications for Agricultural Education

HAROLD ALBERTY, The Ohio State University

This is an outline of a talk on The Eight-Year Study made at the A. V. A. Convention in Toledo in December. Next month Dr. Deyoe, of Michigan State College, will present certain implications of the study for agricultural education.

Editor

PROBABLY not again in our generation will so much time, thought, and money be expended in any single experiment to improve secondary education as was spent for the Eight-Year Study of the Progressive Education Association. During an eight-year period, 1930-1941, 30 schools co-operated with over 300 American colleges in determining the effect upon college success of radically different types of secondary-school programs. More than 1,500 pairs of students (the pairs being made up of one student from a conventional school and one from an experimental school) were carefully studied by experts selected from the colleges.

Why the Study?

The study was instituted because of general dissatisfaction among the high schools and colleges with the product which the secondary school was turning out and with the conventional college entrance requirements. Some of the charges made against the secondary schools were: (1) they had no central purpose; (2) students were inadequately prepared for responsibilities of citizenship; (3) learning conditions were unsatisfactory; (4) the curriculum was far removed from needs of youth; (5) traditional subjects had lost their vitality; and (6) there was little evidence of unity. On the other hand, the responsibility for the situation was blamed on the antiquated college entrance requirements.

What the Schools Did

The schools participating in the study followed different procedures:

(1) One or two did practically nothing; (2) a few tinkered with the curriculum (*e.g.*, added a few subjects, shifted requirements, improved guidance, and increased the number of extracurricular activities); and (3) some few made an honest endeavor to study their philosophy and program, under the influence of an evaluation staff and educational philosophies. They examined:

1. Role of school in democratic study
2. Needs of youth
3. Nature of learning
4. Significant values

Upon the basis of these findings they sought to revise their curriculums. Some

significant revisions were:

1. Improvement of subjects (*e.g.*, mathematics)
2. Bread fields
3. Unified studies
 - a. Culture epoch approach
 - b. Contemporary problems approach
 - c. Youth problems approach

General Improvements in the Programs

1. Clearer philosophy
2. Improved curriculum
3. Better guidance
4. Co-operative teaching
5. More pupil-teacher planning
6. Better community relationships
7. Better evaluation

What Were the Results?

1. Slightly better grades of the experimental group made in college in all subjects except foreign languages
2. Better understanding of meaning of education
3. More participation in aesthetic experiences (*e.g.*, symphonies, drama, etc.)
4. More participation in organized groups such as forums, political, economic, and social groups, with the exception of religious groups
5. Higher percentage of nonacadem-

Readjustments in the Teacher Education Programs to Meet the War Situation

(Continued from page 207)

come technicians in the armed forces? Perhaps we should give them training in certain farm enterprises and activities and leave the broader aspects of farmer training to a later time. Farm shop, including emphasis on motors and ability to produce certain critical enterprises should form the core of the program for high-school boys in agriculture. Programs of teacher education should provide teachers to give this type training.

The manpower needs for military services have already depleted communities of boys for part-time classes. Classes for this group are out for the duration.

The need for adults in the armed forces and in war industries have taken many of our evening-class men. This group, however, is the one for major emphasis until the war has been won.

3. *The Policy Relative to the Functioning of Higher Institutions of Learning.* The national program now being considered and

- ic honors
6. More active concern for public affairs
7. Better orientation in choice of vocation
8. Better reading programs

General Conclusions

1. High-school programs may be radically changed without impairment of the chances for college success.
2. Unit requirement for college entrance is a very poor method of selection.
3. Seemingly little evidence exists that a given pattern of units in high school is superior to other possible patterns.

Possible Implications for Agricultural Education

1. Colleges should accept credits in agricultural subjects upon the same basis as they accept credits in the more traditionally "respectable" subjects.
2. Agricultural education should re-examine its philosophy and purposes.
3. Agricultural education should seek to bring about further unity in the program and more co-operation with other areas.
4. Agricultural education should re-examine its evaluation program.
5. On the whole, agricultural education has incorporated many of the things that proved significant in the Eight-Year Study; *e.g.*, community relationships, problem and project teaching, co-operative planning.

known as the *Day Plan*, sponsored by the American Council on Education, proposed that higher institutions of learning be used for the duration for training certain technicians. Agricultural teachers are not in the proposed group. This means, if the plan is adopted, that there will be little or no pre-service training of teachers of vocational agriculture next year. The program in the future must be built around in-service training.

Teacher education institutions should make every effort to secure the services of technical men in the colleges, especially shop, canning, dehydration specialists, and teachers of certain farm enterprises, who will probably have little to do, to give short courses to teachers in the field.

The teacher-trainer must plan to get into the field and work with teachers thru individual visits, professional short courses, technical training, and the like. While he is doing these things, let us hope he can keep a record of some of his observations and experiences so that he will be in a position to contribute to the development of a better program of vocational education for a peaceful and peace-loving world. This probably is all the research he can do during the emergency, but it can be important in the making of the world of tomorrow.

Opinion of Supervisors on Farm-mechanics Content

L. J. HAYDEN, Teacher, Wellsboro, Pennsylvania

NEAR the end of August, 1942, a questionnaire was mailed to all the state supervisors of vocational agriculture asking that they, or their designated representatives, check the percent of time that should be given to the various skills as now commonly taught in the farm-mechanics course of our vocational agriculture curriculum. Of the 48 questionnaires sent 33 were returned. These 33 have been averaged, and the percent of time which the supervisors believe should be allotted to each of the 17 groups of skills is shown in the table below.

It is interesting to note that farm-machinery adjustment and repair is given more time than farm woodwork and carpentry. This, no doubt, is due largely to the present emphasis given farm-machinery repair as a measure of national defense.

There is considerable variation in opinions about many of these groups of skills. A number of supervisors do not think welding has a place in vocational farm-mechanics instruction, yet others think it should have as much as 10 percent of the teaching time. A supervisor in

one of the Eastern States thinks that 50 percent of the time should be spent in farm-machinery repair, yet the modal figure given in the answers was 15 percent and the average, 16.65 percent.

In the total amount of time which the supervisors said a teacher should spend on farm mechanics, only two teachers went as low as 20 percent. All the others were higher, and two went as high as 50 percent, which brought the average up to almost 30 percent. The modal figure given was 25 percent. Many interesting comments and several letters of explanation were included with the replies to the questionnaires. The following is quoted from one such letter, which may indicate a change in our thinking about the teaching of facts and skills in vocational agriculture: "A farm pupil who is a good farm-shop boy will have and use efficient farm equipment. If he can read, he can (and will) get information about crop production from bulletins and other easily available sources; but he will not get from any other source that I know of except the school, adequate training in his farm-shop work."

A decade ago the writer conducted a similar survey of farm-mechanics teaching content, in which 55 replies were received from men selected by their supervisors as outstanding teachers of farm mechanics. These men listed what they thought would be a desirable percentage of time to spend in a similar list of skills. For comparison this table is presented. For comparison this table is presented:

It would appear from these two surveys that the amount of time suggested for each group of skills has changed. The supervisors think that less time should be spent on woodwork than was thought desirable 10 years ago by teachers. Certainly such skills as plumbing, electric wiring, principles of surveying, welding, and especially repairing farm field machinery should be increased, according to the supervisors.

Young Farmers Improve Dairy Herds

Oscar A. Kimmel, Teacher, Millersburg, Pennsylvania

THE Millersburg Young Farmers' Association held its first meeting on October 6. At this meeting the members of the association selected Dairying as their course of study for the year.

At the next meeting of the Young Farmers' Association enthusiasm ran high, and every member contributed in outlining jobs which were to be discussed in our year-round course of dairying.

Beginning with December, the association set aside the first Monday of each month as the milk-testing meeting. Each member brought samples from the individual cows of his home herd, weight of milk, and feed for the month. After testing, each Young Farmer recorded his results in a dairy herd record book like those used for vocational agriculture projects in Pennsylvania. Feeding recommendations were calculated for the individual cows. These records were summarized each month and published in the local paper.

The Millersburg Young Farmers' Association completed records on 37 cows from six farms for the month of April. These cows produced 28,167.15 pounds of milk and 1,135.13 pounds of butterfat.

Methods Used

Our meetings are conducted on the informal group discussion basis. Most of the information is presented out of the experiences of the group. This type of instruction has proved successful to us because: (1) the men are always anxious to follow a program which they know to have been successful for their neighbors; (2) it gives each man the feeling that he has something to contribute for the benefit of the group; (3) each man has a chance for assistance in solving his individual problems; (4) it keeps the teacher of vocational agriculture practical and in many cases increases his knowledge of the subject.

The association meets every Monday night during the school year and the first Monday night of the month during the summer; at the time of this writing it is planning for the annual reorganization meeting in September.

Table I—Time Devoted to Shop Skills

| Groups of Skills | Percent of time devoted | |
|---|-------------------------|---------|
| | Average | Range |
| 1. Electric and acetylene welding | 3.65 | 0 to 10 |
| 2. Surveying, drainage, terracing, irrigation | 4.61 | 0 to 10 |
| 3. Harness repairing and oiling | 3.00 | 1 to 8 |
| 4. Painting and glazing | 3.14 | 1 to 7 |
| 5. Concrete construction | 4.65 | 2 to 10 |
| 6. Soldering | 2.65 | 1 to 6 |
| 7. Cold iron working: measuring, cutting, tapping, threading, shaping, drilling, and cold riveting | 6.77 | 0 to 15 |
| 8. Forge work or blacksmithing skills, hot metal | 6.84 | 3 to 12 |
| 9. Gas engine and tractor adjustment and repair | 9.80 | 5 to 20 |
| 10. Use of electricity and farm wiring | 5.88 | 2 to 10 |
| 11. Farm woodwork and farm carpentry | 12.80 | 5 to 25 |
| 12. Elementary drawing, sketching, lettering, or blueprint reading | 2.88 | 0 to 5 |
| 13. Sharpening and maintaining hand tools | 6.38 | 0 to 10 |
| 14. Farm-machinery adjustment and repair | 16.65 | 8 to 50 |
| 15. Ropework, including splices and knots | 2.53 | 1 to 5 |
| 16. Plumbing for rural water supply and waste system | 5.26 | 2 to 10 |
| 17. Furniture repairing and refinishing | 1.65 | 0 to 5 |
| 18. Other skills not listed | .7 | 1 to 5 |
| Average of total agriculture teaching time which should be spent in teaching farm mechanics during a pupil's four years of high-school training in vocational agriculture | 30.66% | |

*The range as shown here represents the lowest and the highest percent of time allotted that group by individual supervisors.

Table II

| Groups of Skills | Percent of Time |
|---|-----------------|
| 1. Woodworking | 27.34 |
| 2. Gas engines and tractors | 12.03 |
| 3. Forge work | 9.49 |
| 4. Farm machinery, operation and repair | 9.21 |
| 5. Fitting and repairing tools | 6.42 |
| 6. Concrete | 7.18 |
| 7. Harness repair | 5.66 |
| 8. Soldering | 4.00 |
| 9. Rope work | 3.80 |
| 10. Farm plumbing, heating, and electricity | 4.14 |
| 11. Painting and finishing | 3.76 |
| 12. Glazing | 1.90 |
| 13. Drawing | 4.65 |

Future Farmers of America

A. W. TENNEY

A Co-operative F.F.A. Market

CHARLES D. CAREY, Teacher, Williamsport, Pennsylvania

IN THE early spring of 1938 the members of the Montoursville Chapter of Future Farmers of America, in regular session, were going over plans for their summer program. The majority of the members were taking garden or truck projects, being in an important trucking area adjacent to Williamsport, Pennsylvania. Two of the most active members made the suggestion that the chapter rent a stand in the Williamsport Growers' Market and co-operatively market the products of their supervised practice programs. The reaction of the group was favorable and enthusiastic. After some discussion, a committee was appointed to investigate ways and means, available locations, costs, etc., and instructed to report at the next regular meeting.

Market Located

The committee was graciously received by Mr. Mahlon Ulmer, manager of the Growers' Market, one of the most modern farmers' markets in the state. It was evident from the start that the boys would receive every encouragement and help possible; however, practically all space was occupied, with no desirable locations available. It was explained that rental charges were based on desirability, and if the boys were willing to take a less desirable stand, they would be at very little expense to try it out.

Before the next meeting another chapter in the county heard of the venture and expressed a desire to do likewise. It was at once realized that it might not be well for two or more groups to be competing

with each other, while if they co-operated, the added variety and volume of products might help insure success. It was finally decided to go ahead and to allow F.F.A. members of any of the nine chapters in the county to market produce on equal basis—a very generous, and, as it eventually proved, a wise decision. Later, a county F.F.A. organization was formed, and the co-operative market has been one of the main activities on its program.

The F.F.A. stand, or market, was duly opened the first week in July, 1938. A standard F.F.A. banner and two F.F.A. emblems constituted the advertising to identify the stand.

It was immediately evident that it would take time to develop a steady, dependable retail trade. To help move the produce coming in, we went in search of some wholesale outlets. A start was made with three restaurants, and even tho our retail trade has grown steadily, we still find that restaurants and tea-rooms, along with a few stores, help insure complete sell-outs each market day.

Other Chapters Co-operate

The same kind of produce from several members, or chapters, is pooled and returns prorated on the basis of grade. It might be said that members soon learn to grade or improve the grade of produce brought to the market.

Good business methods have been followed. Expenses are held to a minimum and the nonprofit, co-operative principle is adhered to. Some produce from out-of-county members and from nonmem-

bers has been handled on a 10 percent commission. On this operating basis members have received practically 99 percent of the gross receipts.

Kinds of Produce Sold

Most of the produce sold has been fresh vegetables, tho considerable honey and some fruit, eggs, and poultry have been marketed. In the way of a few minor or sideline items, the boys have sold sweet cider, maple syrup, dried corn, and flowers. During the summer of 1941, the Williamsport Growers' Market increased its facilities and service thru the addition of a modern cold storage locker plant with quick-freezing units. Some of the first produce to go into it was from the F.F.A. stand, the chief items being 200 quarts of shelled green limas and several bushels of green beans. During the season just passed, the boys supplied over 1,000 pounds of frozen green peas, 450 pounds shelled limas, and 500 pounds soup beans, green and yellow.

The members have, thru this venture, found a market for their produce and have received good training in salesmanship and in marketing procedure.

In 1938 the F.F.A. co-operative market operated 10 weeks, from July to the middle of September. The marketing season has lengthened each summer until this past season, 1942, the boys were on the job 20 weeks.

During these five years, all of the nine chapters in the county have participated. The whole program has been optional, with no contracts or "strings" of any kind. One chapter, for example, marketed some produce the third year, but the following season developed a market of its own in a near-by summer resort. No more than five chapters have participated in any one year.

The first year, the total volume of business was about \$500. Growth has been steady, and this last season over \$2,000 worth of produce was marketed.

The Future

What lies ahead during this war period is difficult to predict. In the midst of several war industries, and with some of our draft boards calling on the farmer boys, our rural areas, including the high schools, have been drained of considerable numbers.

Labor shortage and transportation difficulties were beginning to hamper our program in 1942. We plan to carry on and hope to increase production and enlarge our marketing program. Maybe we will have to call in the girls to help.

Under our Constitution only the Federal Government is entrusted with the responsibility of waging war. Therefore, in this total war all elements of our national life—education included—must respond to the wishes of our Federal Government.—Senator Thomas (Utah)



F.F.A. Market

Agricultural Career Education

(Continued from page 211)

In Arizona. Before white settlers arrived in Arizona, American Indians had developed a highly efficient agriculture. They have been described as particularly ingenious. They even practiced well-planned irrigation. 7:64, item 5

Indian Agricultural Lore. Agricultural lore among the North American Indians appears to have come down by imitation or more or less "unconscious absorption" from parents, grandparents, the elders of the tribes, "priests," etc., boys coming early under the instruction of their male relatives and girls under that of their female relatives.—*Enc. Britannica, 1910 Ed., XIV., 480*

Early Scientists Aided Agricultural Education

European. "Lavoisier (1743-1794), who laid the foundations of modern chemistry, made experiments on one of his farms." Dr. True lists more than a half page of early European scientists and their contributions to agricultural education from which Americans, including George Washington, benefited. 2:4-5

American. ". . . John Bartram (1699-1777) and his son William . . . who, by extensive travels and collections from New York to Florida, made important contributions to knowledge of American plants, established a botanic garden near Philadelphia, imported many varieties of cultivated plants, and disseminated many species to scientists and growers at home and abroad." Other early American scientists and their memorable contributions to agricultural education are listed by Dr. True and fill nearly a full page. 2:5

Early Agricultural Calendars and Books

1752 "The earliest literature on horticulture was in the form of calendars which were inserted in almanacs and then sometimes published separately. An example was the *Gardener's Kalendar*, first published in an almanac at Charleston, S. C., in 1752. An American edition of Marshall's *Introduction to the Knowledge and Practice of Gardening* was published at Boston in 1799." 2:30

1760 "The first distinctively American book on agriculture is commonly said to have been *Essays Upon Field Husbandry*, by Jared Eliot (1685-1763), of Connecticut, which contained six essays originally printed separately and first brought together in an enlarged edition issued in Boston in 1760." 2:29

1790 "Samuel Deane, of Massachusetts, in 1790 published an encyclopedic work entitled *New England Farmer, or Geographical Dictionary*." 2:29

1793 ". . . *The Practical Farmer*, by John Spurries, of . . . Delaware, published in 1793 . . ." 2:29

1799 "John Beale Bordley, of Maryland, published *Essays and Notes on Husbandry and Rural Affairs* in 1799, and with additions in 1801." 2:29

Early Agricultural Periodicals

1776 "Before the beginning of the 19th century agricultural subjects were often treated in newspapers or other journals of a general character. The first issue of the *New Jersey Gazette*, established in 1776, stated that 'Proposals for improvements in agriculture, and particularly in the culture of hemp and flax, will be inserted with pleasure and alacrity.' Other 18th-century journals which provided agricultural articles were: *The Rural Magazine*, published weekly in 1796 in Newark; *The Newton Farmer's Journal*, begun in 1797 at Newton, N. J. 2:28

Early Agricultural Societies

European. "In their organization and work the early American Agricultural societies were greatly influenced by the societies in Great Britain." 2:7

1723 To these British societies and the British Board of Agriculture, Dr. True devotes more than a page. They began in Scotland in 1723, in Ireland in 1731, at London in 1754, and at Bath in 1777. 2:6-7

American. "The American Philosophical Society, founded in 1744 under the leadership of Benjamin Franklin, in its earlier years published many articles on agricultural subjects . . ." 2:7

1785 ". . . The first society for the promotion of agriculture in the United States was organized at Philadelphia on March 1, 1785, and on the 4th of July following, George Washington and Benjamin Franklin were elected members." 1:2 and 2:7

"It was an example of the new spirit of scientific improvement." 5:1784

"A similar society was organized in South Carolina in the same year (August 24), which proposed . . . among other things, to establish an experimental farm—the first suggestion of the kind in our history." 1:2

To these and other early agricultural societies in North America, Dr. True devotes 10 pages. Those about whose activities something is known, and whose organization came before the year 1800, appeared as follows: in New York in 1766; Maine in 1787; Massachusetts in 1792; and Connecticut in 1794. 1:See index. 2:7-

1794 The first effort in the United States to present the claims of agricultural education to a legislature and to incorporate instruction in agriculture in the common schools was made by the Philadelphia Society for the Promotion of Agriculture in 1794. 1:3

Early Charity Schools Taught Farm Practice

1740 "The Bethesda school was founded in 1740 at Ebenezer, a short distance from Savannah, by George Whitfield, the great colonial preacher. Discussing the purpose of this school for orphan boys, he said: 'It is my design to have each of the pupils taught to labor so as to be qualified to get his own living.' This school had great influence on subsequent developments, both in agricultural education and in general education in Georgia." 1:88-89

1755 South Carolina: "A group of planters interested in the culti-

vation of indigo began about 1740 to hold meetings which were largely convivial but at which they talked the indigo industry and means for improving it. In 1755 this club, known as the Winyaw Indigo Society, founded a charity school and was incorporated to maintain it. The school flourished for more than a hundred years, was revived after the Civil War, and finally was merged with the Georgetown High School." 2:8

1796 "Dr. John de le Howe, of the Abbeville district, devised the bulk of his property to the society (Agricultural Society of South Carolina) for an agricultural school on his estate for poor boys and girls, at which manual labor was to be combined with science related to agriculture. The society resigned this trust to the state, which appointed a board of trustees under whom the school has since been maintained." 2:8

George Washington, 1732-1799 First in Farming

George Washington has famous firsts to his credit. He was "First in War, First in Peace, and First in the Hearts of his Countrymen." To these another has been added.

A Country Gentleman It was added by Jack Gunning, of Oshkosh, Wis., first-prize winner in the 1937 national Future Farmers of America public speaking contest, in his speech in the final contest at Kansas City, Mo., the title of which included: "First in Agriculture." Opening his address, he pictured Washington as a Virginia gentleman at his desk writing a letter to the eminent Englishman, Arthur Young, described by Gunning as "the foremost scientific farmer of his day and author of the first book concerning scientific methods, *The Annals of Agriculture*." This citation from that letter, and the compiler's notes which follow, justify Jack Gunning's judgment:

"The more I become acquainted with agricultural activities, the more I am pleased with them; inasmuch as I can nowhere find so great a pleasure as in these innocent and useful pursuits. Indulging in these feelings I am led to reflect as to how much greater to an undebauched mind is the pleasure of making improvements of the soil, than all the vain glory which can be had from ravaging it."—U. S. Office of Education Misc. 1982, p. 1

Distrusted Slavery Like other Southern planters, Washington owned and used slaves; but he never abused them. He practiced the patriarchal system of Maryland and Virginia, as contrasted with the horrors of the absentee-owner, hired-overseer, slave-driving system practiced too often on big indigo, rice, and cotton plantations farther south. But before his retirement from public duty in 1797, he had resolved never to obtain another slave; "wished from his soul" that Virginia would abolish slavery, ("it might prevent future mischief"); and at his death, his will freed all the slaves he owned.—Joseph Schafer "Social Hist. Am. Ag.", 7:1ff; Enc. Britannica, 1910 ed. XXVIII, 348

Technically Educated "George Washington was one of the best technically educated men of his day." And his knowledge was not limited to his own country. Sir John Sinclair, "the

(Continued on next page)

inventor of statistics" and president of the Highland Society, established the British wool society and the sheep fair at Newhalls Inn in 1791, secured the establishment of the Royal Board of Agriculture, and was "appointed its first president in 1793." Washington's correspondence shows that "he had the benefit of all of the information to be obtained from the father of the British Board of Agriculture." 1:2

A Persistent Experimenter "He early determined to study and experiment with a view to improving agricultural conditions for himself and farmers generally. While he began with tobacco as his money crop, he changed to wheat and flour with special reference to trade in the West Indies and afterwards became largely engaged in growing forage crops and livestock." 2:14

Beginning as early as 1760, he "grew many kinds of fruits, trees, and ornamental plants collected from various countries, maintained a conservatory and a small botanic garden, and had many experimental plants on various plantations." His crops, in addition to wheat, included timothy, clover, and alfalfa; and his fertilizers, marl, gypsum, and salt. 2:15

He Wrote Detailed Records and Directions His letters of directions were marvels of attention to minute details. The index to the authorized edition of his journals reveals references as follows: 19 to cabbages; 55 to carrots, grown as a field crop; 174 to oats; also references to 75 kinds of trees and shrubs, and to 10 kinds of grasses.—*Counted by John T. Frederick, cited in his "Golden Hours" radio talk from Chicago February 21, 1942, and confirmed in his letter of April 14, 1942, to this compiler*

Farmed for Profit Washington became a "book farmer." 2:15. But to George A. Washington, one of his farm managers, he wrote: ". . . my object is to labor for profit, and therefore to regard quality, instead of quantity, there being, except in the article of manuring, no difference between attending a good plant and an indifferent one."—*Sparks, XII, 337*

Ahорred Bad Farming He was not blind to regrettable agricultural shortcomings. To William Strickland, in England, he once wrote: "Your strictures on the agriculture of this country are but too just. A half, a third, or even a fourth of what we mangle, well-wrought and properly dressed, would produce more than the whole under our system of management. . . . we ruin the lands that are already cleared, and either cut down more wood, if we have it, or emigrate into the western country."—*Sparks, XII, 330*

Approved Public Aid to Agriculture 1790- Washington saw the need of public support of agencies for upgrading agriculture. In his first annual message to the Congress, he said: ". . . It will not be doubted that with reference either to individual or national welfare, agriculture is of primary importance. Institutions for promoting it grow up, supported by the public purse; and to what object can it be dedicated with greater propriety?"—*Dabney, 1:637, item 126*

"His experience as a farmer and experimenter convinced him that the im-

provement of agriculture was of such fundamental importance to the growth and prosperity of the United States that the public ought to share in the maintenance of agencies for this purpose. 2:15. In 1796 he "suggested to Congress the establishment of a National Board of Agriculture." 5:1185

Believed U. S. Best Nation on Earth for Farming George Washington, in short, had faith in the future of American agriculture. "I can observe, generally," he said, "that the United States, from their extent, offer a variety of climate, soil, and situations that no country in Europe can afford; and that, in cheapness of land, and in the blessings of civil and religious liberty, they stand perhaps unrivaled by any civilized nation on earth."—*From letter to Robert Sinclair, Scotland. Sparks XII, 308*

Ardently Advocated Education in Civic Virtues Distinctly American In addition to the other firsts to his everlasting credit, George Washington has been declared "The First Great American."—*Cyrus Kendall Adams, President, University of Wisconsin, in Johnson's "Universal Cyclopaedia," 1895 ed., VIII, 631.* And Washington sought to keep America great by the aid of education. Witness his will and his "Farewell Address."

In his will, after leaving a portion of his property for the founding of a national university at the capital, he explained his purpose thus: "It has always been a source of regret to me to see the youth of these United States sent to foreign countries for the purposes of education, often before their minds are formed or they have imbibed any adequate ideas of the happiness of their own; contracting too frequently not only habits of dissipation and extravagance, but principles unfriendly to republican government, and to the true and genuine liberties of mankind, which thereafter are rarely overcome. For these reasons it has been my ardent wish to see a plan devised on a liberal scale which would have a tendency to spread systematic ideas through all parts of this rising empire, thereby to do away with local attachments and state prejudices, as far as the nature of things would or indeed ought to admit, from our national councils."—*Ibid. (Adams)*

Finally, in his "Farewell Address," September 17, 1796, Washington urged: "Promote, then, as a matter of primary importance, institutions for the general diffusion of knowledge. In proportion as the structure of government gives force to public opinion, it is essential that public opinion should be enlightened."—*Jared Sparks, "Writings of George Washington," XII, 227*

The Colonial Era: in General

1790 "The settled area extended westward an average of 255 miles." 5:1184

1790-1820 "The era of turnpike (toll-road) building improved communication and commerce between settlements." 5:1184

1790 "Over 90 percent of all persons gainfully employed were engaged in agriculture. Many industrial functions which were later taken over by factories were at this time a regular part of the farm economy." 5:1184

"Northern farmers continued to be

largely self-sufficient, while the plantation economy of the South remained largely commercial." 5:1185

On the Southern plantations, indentured white servants "in the course of the 17th century . . . were gradually superseded by African Negro slaves." Tobacco, at first the most popular and profitable commercial crop, in some cases had given way to rice, or rice and indigo, or cotton—short staple or Sea Island. Even the "benevolent Maryland and Virginia planters" sold their surplus hands "down the river" for work on the big commercial plantations, where slaves, owned by absentee landlords and driven by hired overseers, found "the severest labor, harshest treatment, and most utter helplessness."—*Joseph Schafer, "Social Hist. Am. Ag.," 70 ff., "Big Business Farming"*

1799 American advance in farming had been "inspired mainly by English examples. Also . . . the most hopeful contributions toward a better type of farming came at first from the larger and economically abler operators." *Ibid.:111*

"With the exception of Jared Eliot (Early Ag . . . Books, above, 1760), the principal writers who influenced American agriculture in the later 18th . . . century were Englishmen . . . George Washington and Thomas Jefferson both corresponded with Young in the hope of obtaining helpful suggestions, and other contacts between improvers of the two countries were not lacking." *Ibid.:111*

Indeed one of the maxims most quoted in America came from the sharp but prescient pen of an Irishman born in Dublin, the satirist Jonathan Swift (1667-1745). That maxim appeared first in the following passage:

"And he (the King) gave it for his opinion, that whoever could make two ears of corn or two blades of grass to grow upon a spot of ground where only one grew before, would deserve better of mankind, and do more essential service to his country than the whole race of politicians put together."—*Jonathan Swift, "Gulliver's Travels; A Voyage to Brobdingnag," Ch. VII, fifth paragraph*

Similarly, educational developments sprang from well-to-do men of parts. Looking backward, in a historical address before the first graduating class at Massachusetts Agricultural College, (opened in 1867), Marshall P. Wilder said: "The parent societies of agriculture and horticulture . . . were founded by men of liberal education, men who knew how to appreciate its advantages in the various pursuits of life. True, they were stigmatized as "book farmers," but to them we are indebted mainly for the harvest we are now reaping."—1:629; *item 45, p. 4*

The Colonial Era closed with the principle of Federal aid for both agriculture and education not only advocated, but also in a measure made law; and it closed with the beginning of group action by agricultural societies.

In brief, "Eighteenth-century ideas of progress, human perfectibility, rationality, and scientific improvement flourished in the New World as in the Old. Benjamin Franklin, George Washington, Thomas Jefferson, and others exemplified this spirit and encouraged its application to American agriculture and rural life." 5:1184

